From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: n5off@w5ddl.aara.org
Subject: "New" R-392 contract
Message-ID: <363862@w5ddl.aara.org>

I picked up a new Collins 392 contract at Baton Rouge.

The 392 list now looks like this.

R-392

Collins	1951	3075-PH-51	0
Collins	1951	3150-PH-51	8093
Stewart Warner for Collins Radio	1952	11653-PH-52	4670
Stromberg Carlson	1952	11653-PHILA-52	6982
Philco	1959	3214-PP-59	466
Dubrow Electronics Industries	1961	52713-PP-61	0
Western Electric	1963	15283-PP-63	1488
			21699

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: Sandy Blaize <70401.134@CompuServe.COM>
Subject: "Old" cartridge fuses, anyone?
Message-ID: <960503205238_70401.134_IHD135-2@CompuServe.COM>

I have a big box of assorted "NON" type cartridge fuses. Various amperages I'd like to unload. Will either sell them or trade for something. I'll E-mail you a list if you are interested!
73,
Sandy W5TVW

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: "TOM N LAIRD 5-5777" <TL39597@deere.com>
Subject: 7360 FS /HT-37 FS
Message-ID: <DACDXX21.TL39597.163006140096124FDACDXX21@TCP30.DX.DEERE.COM>

Date: 05/03/96
From: TOM N LAIRD 5-5777 TL39597 - DACDXX21
To: INTERNET - DACDXE01
Subject: 7360 FS /HT-37 FS

A friend of mine(non-ham) has a brand new RCA 7360 tube for sale. Price....
$30 shipped (cont. US). Please contact me.

Tom WC9M Moline, Il. tl39597@deere.com

I also have a working HT-37 Hallicrafters transmitter for sale or trade on
a SX-42, Superpro, SX-73, Breting 14. Outright price $125. Don't really
want to ship, but will consider it.

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: DMedley@gnn.com (David MEDLEY)
Subject: 7360 tubes FS
Message-ID: <199605042208.SAA29206@mail-e2b-service.gnn.com>

I have two 7360 tubes in their original RCA boxes which I do not
need. These are hard to come by tubes and I think used in some
Squires Sanders and other receivers of the same age. If anyone
needs a 7360 for use in an existing radio or as a spare for an
existing radio please e-mail me.
Regards
Dave KI6QE

David Medley

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: "Garey Barrell, K4OAH" <75025.73@CompuServe.COM>
Subject: Anderson, SC Hamfest
Message-ID: <960504191348_75025.73_FHD39-1@CompuServe.COM>

Well, let's see if I can post something to the list without getting myself in
trouble.

Quite a bit of BA stuff at Anderson. Very little marked with prices, so not
much help from that standpoint, but at least we know ALL of the BA's are not in
someones basement behind locked doors.

3) National NC-300's. Two fairly ratty ones and mine which sold for $150.
2) Halli S-40B's fair.
1) Hammarlund HQ-170 marked $35 ! "with case" Fair to poor, but supposedly
worked. Front panel not bad.
1) Collins 75S-3 / 32S-3 with 312B-4 and 516 power supply. Supposedly sold for

$450 before I got there.
3) Drake 2-B's, fair to good. One with 2-B Speaker, (not 2-BQ) Don't see many of those.
1) Drake C Line. Good, but the jerk had pulled the 500 Hz CW filter (standard with the receiver when new.)
1) Drake A Line. With D-104. Good, chassis corrosion. Marked $275. Still there when I left.
1) Drake T-4X. OK, but missing PA cage and cabinet top. $40
1) Drake T-4X w/ AC supply and MS-4 speaker. Dirty but appeared to be all there. $100
2) Drake L4-B's. One marked $750 and sold.
1) Halli S-76. Nice $125
1) Collins 75A-1. Beautifully restored and expensive. Have seen it at several hamfests in the area.
1) Collins Exciter ? Maybe 310-A. Didn't get too close, it might have grabbed my leg and followed me home!
1) Johnson Viking I. Looked ok from the outside.
1) Johnson 122 VFO.
3) Heath HW-101's
1) Heath DX-100. Dirty
1) Heath SB-610.
Several HW-16's from dumpster to nice quality. Couple of HG-10 VFOs. Couple of HW singlebanders.

Lots of scopes, Tektronix, HP, EICO, etc.   TEK Scope carts. TEK 575 Curve Tracer marked $175. (This one has been around a while too!)

I think there was even more, but that is all I can remember. Maybe others will add to this.

73, Garey - K4OAH
Atlanta
75025.73@compuserve.com

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: "Garey Barrell, K4OAH" <75025.73@CompuServe.COM>
Subject: Re: BA RTTY
Message-ID: <960503220945_75025.73_FHD71-1@CompuServe.COM>

Herb and group. I was interested to see Herb's mention of the DT-600 TTY Demodulator. I did the PC board layout (tape and dots on mylar, no CAD) and the design modifications of that unit back in 1968. The project was done for a system called "CATC" or Computer Automated Teletype Control (or something like that!) for Navy/Marine Corps MARS. It was an attempt at routing MARS traffic by detecting callsigns in message headers. The headers were decoded with TTL logic rather than by breaking the tines off of "Universal Code Bars." (Lets see if anyone else remembers those!) Kind of a very primitive packet routing system.

My real interest arose out of a "minor disagreement" with Irv Hoff, W6FFC / K8DKC over the mechanical design of his ST-6 demodulator. We "discussed" for hours, (and many rolls of paper,) his insistence on plug-in / backplane construction rather than single board construction of the ST-6. These discussions were handled on the 14.075 autostart frequency. Irv was a United Airlines pilot and I worked a normal engineering job, so with different work schedules and time differences, very little of the discussion was "real-time." He wanted to do the backplane method, with its nightmare wiring job, to make it easier to plug in various "modules" for experimental purposes. It was also "the way computers were being built" at the time.

Anyway, I bet him I could put the whole thing on a 6 inch square card and greatly simplify construction and interconnect. He doubted me, so of course I had to do it! Then Navy Mars got interested in using it, and the Ham Radio article followed. A couple of guys put together kits for the DT-600 and sold them for a while, but I suspect Irv sold a lot more ST-6 kits through HAL than our guys did.

And so it goes.......

Garey - K4OAH
Atlanta
75025.73@compuserve.com

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: "Howard R. Weeks" <weeksh@csranet.com>
Subject: Re: BA RTTY
Message-ID: <199605040644.XAA15821@primenet.com>

I still have an operational DT-600 along with a crystal controlled FSK generator that I believe was a part of the DT-600 system. Still use it along with computer displays as well as mechanical teletypes on the ham bands. I also still have an operational Mainline TTL-2 demodulator that is very effective with the R-390 as well as other receivers.
---Howard Weeks
weeksh@primenet.com

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: Sandy Blaize <70401.134@CompuServe.COM>
Subject: RE: Baton Rouge Hamfest
Message-ID: <960504173956_70401.134_IHD37-1@CompuServe.COM>

Hello gang!

The Baton Rouge fest was somewhat of a disappointment as far as old gear went.

Seen were:
Hallicrafters HT-32 price unknown
Heathkit DX-60B well used and with several substitute knobs.
Price was unknown.
Hallicrafters S-22 "Skyrider Marine" in fair shape for $80.
Meck transmitter (model unknown) missing tubes, unknown condition.

Several old Pilot vernier dials with ornate bakelite housing
@ $7.50 each. (One left with me)

There was a big ragchew session between Jack- W4PPT, Joe- KC5IJD, Tom- N5OFF, Joe- KK5SQ and Sandy- W5TVW. Now we know how ugly we are to each other! Wish we'd had a bit more time, a place to sit, and a few ice cold 807's! Joe-KK5SQ and I 'witnessed' Jack's famous BIG bug catcher antenna, the 'guy rigging' and base his little BMW is attached to! Quite a sky hook Jack! Looking forward to meeting more of the "BA" crowd. Also seen there were Jake-KK5HY and his long-lost-twin Keith-KK5FE.

73,

Sandy W5TVW

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: "Joseph W. Pinner" <kc5ijd@dns1.net-connect.net>
Subject: RE: Baton Rouge Hamfest
Message-ID: <203602070838.CAA22322@dns1.net-connect.net>

>There was a big ragchew session between Jack- W4PPT,
>Joe- KC5IJD, Tom- N5OFF, Joe- KK5SQ and Sandy- W5TVW. Now we know how
>ugly we
>are to each other! Wish we'd had a bit more time, a place to sit,
>and a few ice cold 807's!

Yes, this was likely the best part of the Baton Rouge fest.

However, Sandy did miss a few items on his list of boatanchors (though he is absolutely right - it was a disappointing hamfest):

Collins 30L-1 (good condition) $ 475
Heath SB-200 (OK condition) $ 350
Three Tempo Ones (no prices)
a parts' set KWM-2 (terrible condition) $ 150 !!!!
3 R-392s (one almost mint, one Collins in good condition, and one other)

$ 200 each
Swan 350 (fair/good) $ 175
FT-101E (I think this was the correct model) (no price)
R-19/A.R.C VHF set / UHF Converter $ 10 (should have picked these up but didn't)

I brought home a non-working HP-400H for $ 3.00 and a pair of PRC-68s (you know I cannot resist a mil set), and a few (very) assorted tubes.

73

Joseph W Pinner
Lafayette, LA
KC5IJD
EMail: kc5ijd@net-connect.net or kc5ijd@aol.com

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: aa4rm%amos.UUCP@mathcs.emory.edu (Marty)
Subject: Re: BC 229, 230
Message-ID: <9605041212.AA10164@amos.YP.mystnite>

Vlad, have you found a Brewster (D'Sverski) P35 Buffalo or a Boeing P23 that needs a radio?

If so, gonna chat with it while it goes up against the little mustached man's tanks on the Western Front?

Marty

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: "Barry L. Ornitz" <u856010@eastman.com>
Subject: Bird Meters
Message-ID: <Pine.ULT.3.91.960503165842.13844B-100000@dua150.kpt.emn.com>

Joe (HB9IBA, W7LPF/4) mentioned that he had a 10 KW Bird pickup slug for a wattmeter. Jay H. Miller (KK5IM) replied that he had slugs for 25 and 50 KW.

I have a number of Bird panel meters in these power ranges and one or two for lower power. It sounds like we should get together. Unfortunately I do not have the big flanged pickup assembly for rigid coax that houses the slugs. But I have seen these occasionally at hamfests so with enough swapping and trading, maybe we can put together a few usable systems for those California kilowatts!

The Bird meters I have all contain a basic 0-30 uA meter movement, so a change of scale would be all that is necessary to use them with other slugs. I had thought about using them with lower power slugs and keeping the big scales. Now THAT would impress those solid-state DX'ers when they visit.

"You mean you can get 20 KW out of a SINGLE 4-1000! Wow!"

This reminds me of the guy who sold homebrew amplifiers around 30 years ago. Using a pair of 813's, his meters indicated he could drive them to 3 KW input power with only 100 watts of drive. Bragging about the rigs, he told me that he even hand-wound his own meter shunts. Yep... ;-)

73, Barry L. Ornitz WA4VZQ ornitz@eastman.com

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: Witmerjr@aol.com
Subject: Clegg Venus Output Power Problem Solved
Message-ID: <960503160054_106023107@emout07.mail.aol.com>

Hello,

A week or so ago I requested suggestions for solving a Clegg Venus low output power problem. It has been fixed. A description of the fix approach follows.

The problem was solved by a slight adjustment of the 12BY7 driver output network variable capacitor. In my older model Venus there is an adjustable capacitor and fixed airwound coil in the plate output network. The previous owner - yes the same one who had the final stage cathode current meter wired in backwards - had positioned a coupling link to this driver output coil. He also disabled the output stage. When I removed the couplng loop and reconnected the final amplifier, I didn't think about adjusting the driver output tuning cap. Mostly because the schematic I had was for a newer version of the Venus (Which doesn't have a tuning cap in the driver output) - and the tuning capacitor is physically hard to see. This Venus also does not have the interconnection jacks for the SS Booster. (External RF Clipper)

73,

Bob

W3RW

witmerjr@aol.com

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: "Ray L. Mote" <rmote@rain.org>
Subject: CV-157 manuals "gone"
Message-ID: <Pine.SUN.3.91.960503150353.22616B-100000@coyote.rain.org>

The manuals will go to Michael Runyan, KK7F <runyan@gonzaga.edu>, but will be diverted temporarily through Robert Downs, WA5CAB <103012.2130@compuserve.com> for reproduction. I'm doing this because there were 7 contenders for the manuals, and I don't want to leave the others "out in the cold". Robert will make repros available to the guys who missed out on this one, if they so desire. (And his repros are really excellent, including full-size foldouts. In this case, they'll have to include a couple of extra-tall foldouts, which are a real pain.) After copying, Robert will mail the manuals to Mike.

Thanks for the interest and help.

73.....Ray Mote, W6RIC <rmote@rain.org> Oxnard, CA

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: Bob Roehrig <broehrig@admin.aurora.edu>
Subject: DeKalb Hamfest
Message-ID: <Pine.ULT.3.91.960504141126.6627B-100000@admin.aurora.edu>

Any other BA/GB folks going to be at the DeKalb Hamfest in Sandwich, IL tomorrow? Looks like Vlad, Ron (K9IKZ) and I will be there. Talk-in on 146.73 or 146.52. BA freq will be 147.51 when there. Hope to see you.

E-mail broehrig@admin.aurora.edu   73 de Bob, K9EUI
CIS: Data / Telecom   Aurora University, Aurora, IL

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: Bill Sorsby <bill.sorsby@dlep1.itg.ti.com>
Subject: Disappointing Abilene Hamfest
Message-ID: <199605050049.TAA12629@dlep1.itg.ti.com>

Drove to Abilene today for not much. Best thing I saw was a well worn HQ-180, missing a few of the original knobs, which had just ceased to work. Seller claimed that filter cap was bad and that he hadn't had time to replace it. Inside it smelled like a fried power transformer. Seller wanted $100 for it and was inflexible... still there when I left.

Other items:
- Drake TR4(C maybe) $450
- Swan Cygnet $275
- Collins S-line $1375
- mil version of HP8640 sig gen $600 (sand-state, sorry)
- Beat up TransOceanic $100
- Hallicrafters SWL receiver (I forget price or model)

Coulda picked up a four to four and a half foot 19" rack cabinet with sloping face and in nice condition for $25... didn't have room for it in the back of my small Japanese sports car. ;-(

Picked up a few knobs, 1996 ARRL Handbook and an HP inkjet reinking kit, then came home.

Regards,
Bill Sorsby, N5BU   bill.sorsby@dlep1.itg.ti.com

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: spr@earthlink.net (Scott Robinson)
Subject: For Sale Halli TW1000 plus...
Message-ID: <v01530501adb1291837e2@[153.37.85.87]>

Here's another of the dreaded "For Sale" posts, but it's short. All prices plus UPS from San Francisco. Help me find my back bedroom before something alien and frightening grows there!

Hallicrafters TW1000 AM/SW large portable, vintage about 1952, resembling a T/O. Fully re-capped and aligned, and with a good 1L6 converter tube. Cabinet cloth shows about threee cigarette burns and has one wrong knob and missing antenna ball and last section, otherwise good. $75

Zenith H500 T/O parts set. Chassis complete, but no tubes. Cabinet mising some hardware. $5

Zenith 6G601M BC large BC portable-the ancestor of the first T/O. This is mainly a parts set; cabinet is missing its latches and the front door but looks OK otherwise. $5

Grundig Stenorette 1/4 inch tape open reel complete dictaphone package, housed in a partitioned attache case. Works. $10

Philco 37-630 horizontal table radio cabinet only, no innnards or dial escutcheons, etc. $5

Bell and Howell recurrent sweep 'scope, works and looks good. $20

Riders volume 7, good condition $15

Thanks for reading this,

Scott Robinson
spr@earthlink.net

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: jproc@worldlinx.com
Subject: Frequency Shift Converter
Message-ID: <Chameleon.4.01.2.960505001339.jproc@>

Dear BA'ers,

Thanks to everyone for contributing their knowledge on BA RTTY. Today, aboard the ship, I was able to copy the daily W1AW RTTY transmission on the recently repaired Model 107 frequency shift converter (FSC). I was surprised that it worked at all, and I can't believe that I got it this far without a manual. That aspect continues to be an on-going headache, especially for a device with a tube count of 18! Now that I've experimented with the FSC, some new questions arise.

1) The 2" monitoring scope displays a point source of light in the absence of a signal. When I tune in an RTTY signal, the beam is deflected asymmetrically in a vertical axis only. By adjusting the receiver BFO in conjunction with the discriminator control of the FSC, the beam will then be deflected symmetrically above and below the horizontal axis and I can copy the signal properly.

Question - What is function of the discriminator control in
the context of a FSC? In the unit itself, the control is connected to two variable inductors. It almost sounds like an adjustable audio passband control whose setting is dependent upon the amount of 'shift' of the received signal (yes/no?).

2) On the monitoring scope, I was expecting to see two ovals with a 90 degree phase shift. Instead, I see the symmetrical vertical line only.
Question - Were there different 'tuning indicator' schemes used in the past or do I have another fault in the FSC?

3) The FSC has a CW mode. There is also a switch to accomodate fast and slow

keying.
Questions - What was the purpose of CW mode and why does an FSC support it?
How does it work? Did hams ever use this mode in the past?

4) On the Model 15 Teletype, there are many lines of text which exhibit
overprint after column 72.
Question - Does W1AW is send 80 column text to accomodate 'glass teletypes'?

The down side of acquiring knowledge is the amount of new questions which
arise :-)

Regards,
~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Jerry Proc VE3FAB
E-mail: jproc@worldlinx.com
Radio Restoration Volunteer
HMCS Haida, Toronto Ontario
~~~~~~~~~~~~~~~~~~~~~~~~~~~~

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: Jim Dillon <beadgal@ptialaska.net>
Subject: Frequently Mutilated was:Phasitron
Message-ID: <01BB38FF.44E820E0@juneau_123.dialups.ptialaska.net>

Hi Simulcasters-
In '62 I was a sophomore at Allegany High with a week-end job at WCUM in
Cumberland MD, having fibbed about my age and emerged from the Baltimore =
Custom House with a First Phone after staying up late all that summer =
memorizing Ed Knoles.
The FM transmitter there was (is! -although the call has mercifully =
changed)
an RCA BTFM-1 which employed the exciter Herb Holeman mentioned. It
had 4 6L6 feeding the coils of a multi-phase motor linked to the =
center-frequency determining capacitor. A hoard of 6AC7s and 6H6s =
sampled=20
and discriminated control voltages referenced from a crystal. This =
leviathon
had been enginered right after the war and output on the old 42-48 Mc.
FM band. It would make a great cordless phone today: 10 watts of
Direct FM. Then, unfortunately, the output had to be doubled by an 807 =
or
some similar poor choice @102.9 Mc. Here, rather than the Nite Owls =
Club,

was my part time job security and radio career. Because the PD was
an Opera Freak and the FM was a vital link in the Texaco Metropolitan
Opera Network which was at the time conveyed station to station from New =
York to Allentown to Hagerstown to Cumberland to Pitts.......
Anyway, I discovered that I could take apart the half-arsed spring =
contact
rollerductor IPA/doubler plate tank coil assembly every Friday night and =
Brasso the heck
out of the arc damage that had accumulated since last weekend. I assured
Ed that La Traviata would wing its way westward uninterupted by the =
clang
of overloads tripping out (and I jumpered the IPA o/l just in case).
I recall the exciter had a 2AP1 displaying a figure 8 on the rare =
occassions
when it was on frequency. At other times the combo-man would reach =
inside
and twirl a knob attached to end of the motor shaft to bring 'Cum on =
your
radio' back to channel 275.
This all ended one day in 1966 when a radioastronomer at the nearby
Greenbank Radio Observatory announced the discovery of a new =
super-Pulsar.
His disappointment was reflected in a notice of apparent violation from
the Third District and the near-record arrival from Quincy of a =
slightly-used
Gates trapezoidal phase mod exciter . We unceremoniously tossed the
BTFME-1 over the hillside behind the tower. I wish I had kept the knobs-
they match those on AR-88.
Jim Dillon WL7CMQ   beadgal@ptialaska.net

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: "D.D. Todd" <dube3@n-link.com>
Subject: FS: Millen GDM
Message-ID: <318A8F9B.49ED@mail.n-link.com>

For sale: Millen cat. no. 90651 Grid Dip Meter. Excellent condition.
Complete with all coils, coil stand and original instruction manual!
Manual includes calibration data. Works fine.
Sell as a lot only. $100.00, plus shipping.
--
73,
Dube Todd   AB5AP   dube3@n-link.com

If we had to tolerate in others all that we permit in
ourselves, life would be completely unbearable.
                    - Georges Courtelline

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: "D.D. Todd" <dube3@n-link.com>
Subject: FS: Original Manuals
Message-ID: <318A8E1C.4314@mail.n-link.com>

I have the following original manuals for sale:

HP 205AG Audio Signal Generator (Operating and Service Manual) $25.00
Heathkit SB-600 Communications Speaker (Assembly Manual) $7.00
Heathkit SBA-100-1 Mobile Mount (Assembly Manual) $10.00
Heathkit IG-102 RF Signal Generator (Assembly, Calibration, Operation Manual)
$15.00
Bird "Thruline" RF Directional Wattmeter (Instruction Book) $20.00
   Has Bird 4431 insert. Covers description, installation, operation,
maintenance;
   includes schematic.

All books are in excellent condition. Prices for books only; you pay shipping..

--
73,
Dube Todd   AB5AP   dube3@n-link.com

If we had to tolerate in others all that we permit in
ourselves, life would be completely unbearable.
                     - Georges Courtelline

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: billo@nti.net (Bill Wilson)
Subject: FS: Hammarlund 170 manual
Message-ID: <19960505003346497.AAB235@LOCALNAME>

I have a original, a little worn and a few notes in it.

     $10

Bill
AC4LC
EMAIL: billo@nti.net

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: John Kolb <jlkolb@cts.com>

Subject: FS: HP-608 manuals
Message-ID: <Pine.SCO.3.91.960504210418.1866A-100000@sd.cts.com>

Picked up manuals for the HP Model 608E and 608F sig gens
at the swap meet. Will sell the originals for $13, or copies
for $6.00 postpaid.

John Kolb KK6IL jlkolb@cts.com

540 S. Kalbaugh St.
Ramona, CA 92065

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: Sandy Blaize <70401.134@CompuServe.COM>
Subject: FT: 6 meter crystals
Message-ID: <960505020343_70401.134_IHD79-1@CompuServe.COM>

Have the following crystals (FT-243 holders) for 6 meters I'd
like to trade, as a lot. Frequencies are:
Xtal 6 meter harmonic
8369.8 =50.22
8375 =50.25 (have 2)
8376.25 =50.26
8390.3 =50.34
8400 =50.4 (have 2)
8420.9 =50.525
8425 =50.55 (have 3)
8450 =50.7
8475.4 =50.85

A total of 13 crystals. Will trade for FT-243 crystals in the 1.800-1.825,
3.500-3.575, 7.000-7.075, 14.000-14.075 Mhz. ranges. Exact frequencies
are unimportant as long as they fall into the ranges indicated. What have you?
All are active and been checked with a test oscillator and frequency
counter.

73,

Sandy W5TVW

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: bill@skeeter.frco.com (William Hawkins)

Subject: Re: Fuse rebuilding
Message-ID: <9605031905.AA00990@skeeter.frco.com>

So the arc snuffing powder was a mixture of chalk and asbestos. Let's hope that Those Who Would Protect Us From Ourselves don't find out about it, or cartridge fuses will go the way of meters that glow in the dark.

My concern over peak fault current comes from an article in a GE newsletter that I read in the early 60's. It was the story of a fault in a bench power supply that propagated through the normal chain of power distribution circuit breakers to blow fuses in the building substation and finally took out the fuses in the 13 KV high line feeding a complex of buildings. I can't cite the article - all I have left is the mental picture of popping fuses on the high line. The article left me with a great deal of respect for the engineering of circuit protection devices in commercial power systems. That's why I suggested a 'real' fuse between the equipment and the power line.

Bill Hawkins

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: berg stephen erik <z931086@corn.cso.niu.edu>
Subject: re:fuse rebuilding
Message-ID: <Pine.3.89.9605031408.A7909-0100000@corn.cso.niu.edu>

Some years back I was cursed with the ownership of a volkswagen dasher diesel. One of the many malfunctions, but the cheapest one to fix, was the mysterious fusible link in the glow plug circuit. One cold morning the beast simply refused to start. I checked for everything I could think of, and the only problem I could find was the lack of plug voltage. I checked the relay, and that was fine. The local dealer was no help. Finally I called the only local shop who worked on diesels, and they told me to replace the fusible link. I finally found it, replaced it with a length of solder, and proceeded to have no further problems in that area for the next 100,000 miles. The car did not even make it into the Ford dealer under its own power to be traded in on a used Tempo. That piece of solder was the most reliable part of the whole lemon, er, I mean German Masterpiece.

73,

Steve WA9JML
z931086@corn.cso.niu.edu

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: w7ni@teleport.com (Stan Griffiths)
Subject: Re: Fuse rebuilding
Message-ID: <199605032017.NAA23154@desiree.teleport.com>

>We checked for makers of HV fuses, and no-one makes them anymore that
>we can find. Also, cartridge fuses in the large cartridges are no longer
>being made. But, such fuses can be rebuilt if you can find the fuse links
>or the right size of fusible wire. Currently I am using individual strands
>of stranded copper wire (No. 40 or smaller) on some of my HV fuses, and
>it seems to work OK. Handling that size wire is sometimes a problem to
>prevent breakage, but one has to make do these days with what one can
>find, just like in the early days.
>
>Good Luck
>
>73/ZUT DE NA4G/Bob UP

I ran into this same problem about 20 years ago. HV fuses were rare and expensive when you did find them. I had never heard of using copper wire as a fuse but it seemed like a good idea to me. I took a length of common ordinary zip cord and stripped the insulation off of it. There I found a lot of fine copper wires but I do not know what guage. The price was right . . . $0!!

Rather than try to string these fine copper wires through old blown fuse cartridges, I just abandoned the cartridge idea completely and installed two standoff insulators about 4 inches apart with threaded bolt studs protruding up from them for about 1 inch. One strand of this fine wire was not good enough to hold the steady plate current of my pair of 4-1000As and would eventually blow with no failure of the amplifier. Two strands seems just right and I have had a few HV failures in the amplifier using two strands so I know they will protect the power supply when they blow. Two strands will not blow on their own, however. The only advantage I can see to trying to reload the cartridges is the bits of fine wire that seem to go everywhere when on of these "fuses" blows would be confined to the inside of the cartridge. Even so, it seems like more trouble than it is worth so I just allow my fuses to vaporize in the air and there are not many small pieces to be found!!

This type of fusing is certainly not very elegant but it has two very important features: it works and its cheap!

Stan w7ni@teleport.com
Aloha, OR

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: Bob Roehrig <broehrig@admin.aurora.edu>
Subject: Re: Fuse rebuilding
Message-ID: <Pine.ULT.3.91.960503162106.19979A-100000@admin.aurora.edu>

On Fri, 3 May 1996, Stan Griffiths wrote:

> One strand of this fine wire was not good enough to hold the steady
> plate current of my pair of 4-1000As and would
> eventually blow with no failure of the amplifier.

A Pair of 4-1000's !!!!!!! Holy Cow !!!!!!!

E-mail broehrig@admin.aurora.edu   73 de Bob, K9EUI
CIS: Data / Telecom   Aurora University, Aurora, IL

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: "Allan Fritsche" <fritsche@msn.com>
Subject: Fuses, etc
Message-ID: <UPMAIL03.199605041319470425@msn.com>

Gang, In my humble opinion, strap a piece of 32 Gage wire across the fuse
block. If it doesn't hold. You got a problem down stream.
Like it or not.

Your friend
Al
fritsche@msn.com

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: "B. D. Hall" <BDHall@ghgcorp.com>
Subject: Re: Fuses, etc
Message-ID: <318B7EA7.4987@ghgcorp.com>

Allan Fritsche wrote:
>
> Gang, In my humble opinion, strap a piece of 32 Gage wire across the fuse
> block. If it doesn't hold. You got a problem down stream.
> Like it or not.

Given the problem of needing to replace a high-voltage fuse where no suitable
replacement exists, I would use a very small wire rather than run with no fuse
like Al

suggests.

Which leads to the question: If I wanted to fuse B+ in my SX-24 I am rebuilding, could I just use standard AG-type fuses rated for 250VAC where the B+ may be much higher and DC rather than AC? I was thinking of doing this in addition to adding a 2 amp fuse to the transformer primary as an extra "well while I am at it, it seems cheap and easy to do and may prevent HV short damage." Any thoughts on this? I am beginning to think that a fuse on the xformer primary should be all I need.

As my senior design project in college, I worked on an electric car project and designed the 144 volt 300 amp power distribution system, which included many, many fuses. Fuses were in the 144 line (300 amp deals), on voltage sensors, contactors, etc just to put my mind at ease... So I spent quite a bit learning about the time delay overload (I think that is it) characteristics of fuses. Due to the high cost of high-amp fuses, some people suggested we make our own. This didn't thrill me, but since we were on a budget I looked into it. I came to the conclusion that the risk just wasn't worth it. I went with off-the-shelf 400VDC 300 amp fuses with a slow enough delay to survive 500amp acceleration spikes. However, back in the dorm, I also spent some time with an ammeter with a very fast reaction time and peak-hold capability. (badically a fast DMM with peak-hold across a precision 0.01 ohm resistor) Using a 12 volt gel cell, I did some experiments in which I measured the fusing characteristics of fine wire. It was fun. What would happen to the wire is that if it was small enough, it would vaporise. Larger wire had to heat and melt, spewing molten copper balls across the dorm floor. I even tried mechanical pencil lead, which was neat! It glowed very brightly until the graphite's binder failed and the lead lost structural integrity. Made lots of smoke and furthered my reputation as a curious nut-case.

So, I would conclude that if you could be sure that the wire will vaporise, I wouldn't feel bad about using that as a fuse with proper non-flamible protection to prevent fire IF the wire doesn't vaporise. Of course, I'd only do all of this if the original fuses were not availible or prohibitively expensive, and use a fuse on transformer primary.

Just my $0.05 worth. Comments encouraged!

Thanks and 73,
Ben
---
BDHall@ghgcorp.com
Benjamin.D.Hall1.jsc.nasa.gov (where I am this morning, ugh!)

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: "Barry L. Ornitz" <u856010@eastman.com>
Subject: Fusing Currents
Message-ID: <Pine.ULT.3.91.960503192835.13844H-100000@dua150.kpt.emn.com>

It has been many years but I remember deriving and solving the unsteady-state heat transfer problem for the heat loss from a conductor with internal heat generation. The wire (conductor) fuses, of course, when the internal generation (I^2*R) raises the wire temperature to its melting point. Heat transfer is mainly by radiation at higher temperatures, and if the wire is long compared to its diameter the temperature distribution becomes parabolic along the length of the wire if the ends are held at a constant temperature. Of course all of these conditions are approximations so the time predicted for the center to melt varies somewhat with the surrounding temperature and the heating rate. [A wire subjected to a large overload blows fairly predictably, but a wire subjected to a current just barely over the predicted fusing current will be extremely sensitive to its surroundings.] A good reference for this is:

> Carslaw, H.S. and J.C. Jaeger, "Conduction of Heat in Solids", Oxford University Press (1959), Second Edition, pp. 154-156.

{Hey, don't let Boatanchor Bob fool you with his salty seagoing CW-op language. He can probably understand this reference better than I can!}

Having said all that, a simple approximation for fusing current is:

$$I = K * d**1.5$$

where "I" is the fusing current in amperes, "d" is the wire diameter in inches, and "K" is a proportionality constant dependent on the wire composition. Some typical values for different metals are:

Copper	K=10244
Aluminum	K=7585
German Silver	K=5230
Iron	K=3148
Tin	K=1642

I agree with Bill Hawkins about using commercial fuses on the primary of all supplies. However for BA Bob's application, I would not worry too much about the safety if the fusible wire is in glass or ceramic. Paper cartridges might be a different matter though.

73, Barry L. Ornitz WA4VZQ ornitz@eastman.com

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: "D.D. Todd" <dube3@n-link.com>
Subject: Re: FW: glowing meters
Message-ID: <318A94E5.4C44@mail.n-link.com>

Lahlum Ross wrote (some deleted) :

> Anybody know what the half-life of radium is? Are these meters in fact painted
> with radium? Is there something else besides radium in the paint that absorbs
> & then reradiates light? (Forgot most of my Modern Physics.)

I don't recall a single instance of anyone dying or getting sick from sitting in front
of an R-390. However, if anyone out there is worried about their meters radiating, you
can send 'em to me.

--
73,
Dube Todd AB5AP dube3@n-link.com

If we had to tolerate in others all that we permit in
ourselves, life would be completely unbearable.
- Georges Courtelline

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: KWDouglas@aol.com

Subject: Fwd: BA RTTY
Message-ID: <960504172343_528221972@emout12.mail.aol.com>

In a message dated 96-05-03 18:17:20 EDT, 75025.73@CompuServe.COM (Garey
Barrell, K4OAH) writes:

>rather than by breaking the tines off of "Universal Code Bars." (Lets see
if
>anyone else remembers those!)

nnnn

Lemme see, do the words "Stunt Box" ring a "bell" for anyone? Very much
more of this thread and I'll have to drag the Model 28 in for the $19.95 lube
job.

Forwarded message:
From: 75025.73@CompuServe.COM (Garey Barrell, K4OAH)
Sender: boatanchors@theporch.com
Reply-to: 75025.73@CompuServe.COM
To: boatanchors@theporch.com (Multiple recipients of list)
From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: Bob Roehrig <broehrig@admin.aurora.edu>
Subject: Re: Fwd: BA RTTY
Message-ID: <Pine.ULT.3.91.960504192404.10106A-100000@admin.aurora.edu>

On Sat, 4 May 1996 KWDouglas@aol.com wrote:

> In a message dated 96-05-03 18:17:20 EDT, 75025.73@CompuServe.COM (Garey
> Barrell, K4OAH) writes:
>
> >rather than by breaking the tines off of "Universal Code Bars." (Lets see
> if
> >anyone else remembers those!)
>
> nnnn
>
> Lemme see, do the words "Stunt Box" ring a "bell" for anyone? Very much
> more of this thread and I'll have to drag the Model 28 in for the $19.95 lube
> job.

OH yeah! We spent much time breaking tines off in the model 15's or messing
with the "dinner forks" in the 28's. As I recall we were trying to use the
FIGS - BLANK sequence followed by another character or 2 for various
purposes, like lighting a "message waiting" lamp.

E-mail broehrig@admin.aurora.edu   73 de Bob, K9EUI
CIS: Data / Telecom   Aurora University, Aurora, IL

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: Jeffrey Herman <jherman@hawaii.edu>
Subject: Re: Fwd: BA RTTY
Message-ID: <Pine.SV4.3.91.960504155132.27622A-100000@uhunix5>

Oh, let's not forget how to drive the other guy nuts (at least on landline circuits): Give him a few dozen bells <Control G was it?>.

On the Coast Guard coastal circuit, a couple bells were a nice way of saying "Ummm, are you there?" (or on midwatch at 0300: "HEY - WAKE UP!!"); but a dozen or so was serious business:

^G^G^G^G^G^G^G^G^G^G^G^G^G^G^G^G "AUTO ALARM HEARD ON 2182 KC -
ANI ONE ELSE GOT IT? DE NMC6"

Here, CG Montery is alerting all the Central Calif. (CG District 12) stations of hearing the emergency dual tone signal on the calling/distress SSB freq 2182. This would happen at least once each night - for some odd reason, the Mexican fishing fleet loved to play with their auto alarm tone. It would usually be followed with a couple hours of drunken singing to each other (on 2182 kc!).

Hmmm, i recall having to keep hitting the return key every few seconds or the circuit would close down on you. I think <control uu> brought everyone's TTY to life - sort of a group call (normally a station's TTY would remain quiet even though traffic was being passed by two other stations - your tty only came alive when there was tfc for your for your station).

That tty sure helped keep the shack warm.

Jeff KH2PZ on the island of Oahu way out in the Central Pacific

---

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: Sandy Blaize <70401.134@CompuServe.COM>
Subject: glowing meters
Message-ID: <960503205244_70401.134_IHD135-6@CompuServe.COM>

Jeff,

Bear in mind that mearly ALL of those military instruments will floresce under UV light. There used to be UV lights in all the cockpits that illuminated the instruments. Just because they glow and persist for a little while does not mean they are radioactive!

Some of the old instruments did have a radioactive isotope added to activate the 'phosphor'. The ONLY way this can be properly detected is with a geiger counter or scintillometer.

Even if they are radioactive, there is usually no danger as long as the instruments are not opened and the residual dust inside inhaled! The BIG danger is from alpha emission from particles in contact with lung tissue. The beta/gamma radiation is fairly low and poses no danger unless you carry the instrument faces around in your pocket or taped to your body all day for years!

73,
Sandy W5TVW

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: "Barry L. Ornitz" <u856010@eastman.com>
Subject: RE: Glowing Meters
Message-ID: <Pine.ULT.3.91.960503173432.13844C-100000@dua150.kpt.emn.com>

Jay (KE6PPF) and Ross (KB9JJR) commented about the glowing meters in R-390's and other military gear. Beside the obvious minute radium doping, the meter paint contains, I believe, mainly zinc sulfide as the phosphorescent ingredient. If you hit a phosphorescent material like zinc sulfide with short wavelength light (like ultraviolet or gamma rays from radioactive decay), it fluoresces fairly brightly. However, the material will continue to emit a weaker light for some time afterward. There should be enough radium in the meter to keep the dial dimly lit. Radium has a number of isotopes having a half life from a fraction of a millisecond to 1600 years.

The persistance associated with CRT screens is generally associated with the phosphorescence of the phosphors making up the screen. Variations on the doping and crystal structure of zinc sulfide can change its basic fluorescent and phosphorescent properties.

73, Barry L. Ornitz WA4VZQ ornitz@eastman.com

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: Lrware@aol.com
Subject: Hallicrafters S-120 Owners Guide
Message-ID: <960504193601_390623788@emout17.mail.aol.com>

Hello firebottle fans,
Today after buying books at a local used book store, I discovered a Hallicrafters S-120 Owners Guide inside a copy of the 1962 World Radio TV handbook I bought. Because I don't own a S-120 this owners guide is

available free to the first S-120 owner who asks for it.
I'm even going to throw in the pages of handwritten notes that
are inside it....
e-mail me to claim todays find.
-Larry Ware
lrware@aol.com

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: billo@nti.net (Bill Wilson)
Subject: Hammarlund 170 manual gone
Message-ID: <19960505015831318.AAA261@LOCALNAME>

Thanks for the replies...I hope to get many more manuals next week.

Bill
AC4LC

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: "Christopher A. Bowne" <radiobwn@q.continuum.net>
Subject: Hosstraders Hamfest
Message-ID: <199605042057.QAA04610@q.continuum.net>

Mike Burke wrote:

Chris, when and where is "Hosstraders"? Thanks. 73, Mike

Mike - I can't believe you dont know about HOSSTRADERS! It has long been the preimere BA swap meet in New England.   It used to be held at the Deerfield, NH fairgrounds. Its now held at the Rochester NH fairgrounds, in May and October.
The May dates are next weekend, May 10th (Friday) and Saturday, May 11th.
Admission is 20 bucks prior to 4 pm Friday and 5 bucks after that. Youngsters get in free.   The trading starts early Friday, goes on way into the wee hours, and starts up again at dawn on Saturday. Everyone sleeps in their vehicles or tents overnight and there are plenty of food stands.
They are kind of expensive though - you will pay more for a meatball grinder than a 360K floppy drive or a good used 6L6!   A great social event for BAers, AMers, DXers, computer nerds, and electronic junk collectors in general. Don't bring the wife - she'll be bored out of her mind, and be aghast at the "accomodations", but you'll have a ball!

Directions:

Route 95 to Portsmouth, NH area, then take Route 16 North to Rochester.
I think the exit is No 13 off 16 (202 North exit), ask at one of the tolls on the

way up to be sure. See my previous posting on KW1I's BA outpost (Re: Rochester Hamfest).

73,

Chris Bowne, AJ1G
Stonington, CT.
radiobwn@q.continuum.net

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: n5off@w5ddl.aara.org
Subject: More Baton Rouge
Message-ID: <363857@w5ddl.aara.org>

Sandy didn't mention the two R-392's at BR.

One was a Stewart Warner 11653-PH-52, condition 9.8 for $200
The other was a Collins 3150-PH-51, condition 9 for same.

Couldn't convince the BA gang to haul them off. Price must have been above market at they were still there when I left.
73 de tom

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: Herb Holeman <choleman@ptialaska.net>
Subject: More polar relays
Message-ID: <199605031946.LAA07468@ptialaska.net>

The story of BA era RTTY has been an interesting thread as it has unraveled on these pages. I've enjoyed many flashbacks over the technology of those times--mechanical printers and vacuum tubes.

Kent, K9JCR, recently wrote about a scheme to avoid the use of a polar relay in his RTTY system, as have several others.

My own station ended up using one because it seemed like the best available way to achieve a degree of isolation between my transceiver, which at the time was a Drake TR-3, and all the high voltage of the selector magnet and keyboard loop.

When using an SSB rig for RTTY, one has the option of simply applying shifted audio tones to the mic jack, which is really a form of audio frequency shift keying (AFSK), but this method can be spectrally polluting unless your SSB rig has extremely good carrier and unwanted sideband rejection--modern rice boxes are pretty good, but BA gear was less so. Lacking good suppression, you can end up transmitting five carriers instead of two, which does not endear you to others on a crowded band!

The preferred method back then, (and today too!) is to use "real fsk", where one of the oscillators in the transmitter chain is frequency shifted by some voltage from the keyboard. As Kent mentioned, one way to do that was to use a switching diode and capacitor, usually across the cathode circuit of a VFO/PTO, adjusting the capacitance for the proper value of frequency shift. This was an effective method because the voltage could be well filtered for hum and noise.

Another way was to use a varactor diode in a similar fashion, adjusting the voltage applied to the varactor for the proper amount of shift, but this voltage must be clean of hum and noise, or your transmitted signal will be gnarly. I used the latter method in the TR-3, inspired by a QST article which used a varactor diode to provide incremental tuning on the PTO during receive (RIT). An obvious next step is to apply an fsk keying voltage to the varactor diode during transmit for RTTY.   The fly in the Edsel Murphy's ointment was that the TR-3 used additive heterodyning on some bands and subtractive on others. This meant that the polarity of the fsk signal could change from band to band, and the contacts on the polar relay offered a convenient way to deal with this issue. The polar relay also avoided ground loops, noise and RF from getting into the sensitive fsk circuit.

Oh, and I almost forgot to mention--since the oscillator being shifted was common to both the transmitter and receiver, it was also necessary to disconnect the fsk keying voltage during receive, so that the PTO would not be shifted by signals during reception. Obviously when using separate transmitter and receiver, many of these issues don't arise.

My present RTTY station is much more futuristic--it's a rice box, a P-C, and a PK-232 using AFSK tones into the mic jack, because the rice box won't do real FSK. I don't think the PK-232 is as good a demod for RTTY as the old sand-state HAL ST-6 that I used in the 70's, but the convenience of a computer screen and keyboard makes up for it, I suppose. I still toy with the idea of dragging out my old ST-6 or DT-600 boards and coupling them into the PK-232 so that I could have the best of an RTTY-optimized older demod and the convenience of the modern computerized interface. I miss the nostalgia of the old clattering rattling mechanical printers but I don't miss their noise, size, weight, or maintenance headaches, but your mileage may vary!

CU on the green keys,

Herb Holeman, WL7BIL
Juneau, Alaska
choleman@ptialaska.net

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: Andy Howard WA4KCY <102452.362@CompuServe.COM>
Subject: Need 3RP1A Scope CRT
Message-ID: <960504162840_102452.362_DHT77-1@CompuServe.COM>

Anyone out there with an extra 3RP1A CRT? Need not be new but should be tested for brightness. Will buy outright or trade other tubes, etc.

Andy, WA4KCY
AMI #9
Carrollton, GA

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: "Thomas A. Adams" <103360.2133@CompuServe.COM>
Subject: Phasitron Lore
Message-ID: <960504084944_103360.2133_JHL42-1@CompuServe.COM>

Hello Herb.

I can identify with your adventures with the GE phasitron rig; I think I know exactly the one you mean, because I recently had the pleasure of scrapping one of 'em (most of it went to my parts stash). The phasitron exciter was long gone, replaced by a Gates TE-3 "Solid Statesman" a couple of decades ago, but from the rig's spare parts stash I got a new, in the box GE phasitron that had never been discarded!

I was VERY familiar with this rig, having serviced it for several years. After all the aggravation it had given me in that time, I took unique pleasure in ripping it apart!

The critter had been the original transmitter for WHA-FM (now, WERN) on 88.7 MHz, at University of Wisconsin in Madison. According to the paper trail, it had been bought new in 1945 (ordered, that is), and delivered in mid 1946. It served as the standby transmitter until early this year; the transmitter site was being moved, and the old GE was deemed too ancient to be worth moving to the new site.

The rig consisted of a couple of blue, streamlined, chrome trimmed relay racks with front doors like a refrigerator, and it had a pair of 4-250s in the final which were driven by an 829B. Output was about 250 watts.

This one also had the optional 3 KW final amplifier housed in a third rack. This PA was a bit strange in regard to tubes too.

Originally, it had used a pair of forced air cooled, external anode, glass jugs that I'd never heard of; they were 7C something or others in push-pull. In the rig's papers, I found something rather unique in the realm of broadcast gear.

In about 1950, the PA tubes were suddenly no longer available. The GE engineers came up with a field modification (more like a metamorphosis, really) in which the tiny PA tubes were replaced by a pair of huge honkin' 4-1000As, suspended upside down in a pair of Eimac air system sockets bolted to the roof of the PA compartment! To complement it, the original internal PA cooling blower was pulled, and a huge new one was sticking a good foot out of the top of the power amplifier rack! That blower stirred up a virtual tornado inside of the rig; the PA compartment was ALWAYS clean, because the dust never had a chance to settle before it was blasted out into the rest of the cabinet. It was also so noisy that when it was running we had to pour the coal to the big Crown air monitor amplifier to hear what was going out.

The University's engineers at the time, Rudy Wolf and Virge Deiter (SK) put in the mod, and did it one better; they increased PA plate voltage from 3000 to 5500 VDC, and the 3 KW final suddenly became a 5 KW! They sawed a plate viewing window in the PA compartment front panel, and I can tell you from personal experience that a pair of upside down 4-1000As, plates glowing a bright orange, is indeed a fearsome sight!

A lot of this ol' rock crusher will sing on the air again, this time running 160 metre AM.

73's,

Mr. T.

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: Bob Roehrig <broehrig@admin.aurora.edu>
Subject: Re: Polar Relays
Message-ID: <Pine.ULT.3.91.960503141611.10914C-100000@admin.aurora.edu>

On Fri, 3 May 1996 Joe_Wilkowski@mc.xerox.com wrote:

> I have used miniature reed relays in this application with good
> success) and use it as follows:
>
> If the TU has a TTL output (capable of only sinking a small amount of
> current) use a common NPN signal transistor like a 2N3904 or similar
> to key the relay. This is how:

Two things to add to what Joe said:

1) Don't forget to put a "snubber" diode across the relay coil (Cathode of diode to +supply, Anode to collector) to kill the turn-off transient.

2) A TTY current loop is reactive and will produce hugh spikes like a relay coil does. To protect the relay contacts connect a series R-C network across the relay contacts. The recommended values are .1uF and 470 ohms. That is the same as the 185 "Network" built by Western Electric that was normally used across the relay contacts.

Mentioning polar relays reminds me that Western Electric made a mercury wetted version called the 314A. This is a direct substitute for the old 255 relay. It's great - no adjustments needed and the contact bounce was eliminated.

E-mail broehrig@admin.aurora.edu   73 de Bob, K9EUI
CIS: Data / Telecom   Aurora University, Aurora, IL

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: Albert S Woodhull <aswNS@hamp.hampshire.edu>
Subject: Re: Polar Relays
Message-ID: <Pine.SUN.3.91.960503165033.3430C-100000@hamp>

Joe_Wilkowski@mc.xerox.com wrote:

> Connect a 12 volt source to One end of the reed relay coil. Connect
> the other end of the reed coil to the collector of the transistor.
> Connect the emitter of the transistor to the DC return line of the 12
> V source. Connect the base of the transistor through a 2k 1/4 watt
> resistor to the TU low voltage key line.   Connect one end of your
> high voltage loop to the common terminal of the relay and the other
> end to the NO (normally open) terminal. And your in business all most.

When driving a relay with a transistor it is generally a good idea to put a diode across the relay coil to absorb the inductive kick generated when the circuit is opened. For an NPN transistor the cathode end goes to the V+ side of the coil and the anode end goes to the collector side, so it has no effect upon the normal operation of the circuit.

I don't know if this is necessary for a low power reed relay, I guess
if you don't do it and lose transistors you'll know it was necessary.

73, Al N1AW
--
Al Woodhull
awoodhull@hampshire.edu
n1aw@k1mea.#wma.ma.usa.na
n1aw@ka1jy.ampr.org

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: Joe_Wilkowski@mc.xerox.com (Wilkowski,Joe)
Subject: Re: Polar Relays
Message-ID: <"<A8718A3181B7677C>A8718A3181B7677C@X-MC-0819-MS2.XEROX"@-SMF->

Folks,
thanks for the feedback on the reverse diode across the reed relay
coil. Inductive transients are not a problem with a small reed relay
coil. The back emf induced is not enough to harm a durable 2N3904
transistor. But as I say below, it can't hurt.

A transient spike bypass capacitor is a good idea across the reed
contacts and I have used the application in both ways. The risk of
not using the cap is contact pitting and as I have said before, I have
not experienced this malady with long term use. Never the less it can't hurt.

cheers

/joe K8FC

>>From: Albert S Woodhull
>>To: Joe Wilkowski@MC.XEROX
>>Cc: awoodhull@hampshire.edu; boatanchors@theporch.com
>>Subject: Re: Polar Relays
>>Date: Friday, May 03, 1996 2:11PM

>>
>>When driving a relay with a transistor it is generally a good idea to
>>put a diode across the relay coil to absorb the inductive kick
>>generated when the circuit is opened. For an NPN transistor the
>>cathode end goes to the V+ side of the coil and the anode end goes to
>>the collector side, so it has no effect upon the normal operation of
>>the circuit.
<<clip>>

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: Greg Raven <gsraven@cris.com>
Subject: Re: Polar Relays; Inductive Kickback of Relays
Message-ID: <199605041322.JAA27486@darius.cris.com>

>From Al N1AW:
>When driving a relay with a transistor it is generally a good idea to
>put a diode across the relay coil to absorb the inductive kick
>generated when the circuit is opened. For an NPN transistor the
>cathode end goes to the V+ side of the coil and the anode end goes to
>the collector side, so it has no effect upon the normal operation of
>the circuit.
>I don't know if this is necessary for a low power reed relay, I guess
>if you don't do it and lose transistors you'll know it was necessary.

This is an OK solution for circuits that will be sensitive to the transient. However, keep in mind that it will slow the release time of the relay. What happens is that current continues to flow through the relay's coil as the diode absorbs the pulse of current from the coil when the transistor turns off.

In circuits where response time will be important, it would be better to simply choose a transistor that will take the punishment. I've found that the high voltage pulse is so short in duration that no damage occurs to even low-voltage rating transistors. If you really wanted to be sure, simply select a transistor with a several hundred volt rating.

73 de Greg KF5N

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: jcall@sirius.com (Jim Carrington)
Subject: Re: R-392/URR, anyone?
Message-ID: <199605040121.SAA15464@moon.sirius.com>

Thanks for your input Tom. You've alleveated most of my fears on the 392 and wetted my appetite. If I see a deal I will probably go for it depending on wallet thickness at the time.
By the way, I always thought the R-5000 was a very good receiver ,and I have its approximate equivalent in my Kenwood TS-850 , but I never compared it against my R-390A. Maybe I'll get a chance to do that this weekend.

73
Jim Carrington

From boatanchors@theporch.com Sat May 4 03:37:35 1996

From: Sandy Blaize <70401.134@CompuServe.COM>
Subject: Re: RE:Fuse rebuilding
Message-ID: <960504011525_70401.134_IHD70-4@CompuServe.COM>

On Fri, 3 May 1996, Stan Griffiths wrote:

> One strand of this fine wire was not good enough to hold the steady
> plate current of my pair of 4-1000As and would
> eventually blow with no failure of the amplifier.

A Pair of 4-1000's !!!!!!! Holy Cow !!!!!!!

E-mail broehrig@admin.aurora.edu   73 de Bob, K9EUI
CIS: Data / Telecom   Aurora University, Aurora, IL

====================================

This man wants someone to HEAR him!!!

I remember an old Navy salt ham (W5EGX) who loved the TCS station! He had old style cartridge fuses in open clips (the 2" X 1/2" variety) and he would 'renew' them the same way: with one or two strands from common "zip" cord! He had things 'adjusted' with his fuse 'sizes' so that they just carried full load. Anything extra and they would pop.

73,
Sandy W5TVW

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: "Christopher A. Bowne" <radiobwn@q.continuum.net>
Subject: RE: Rochester Hamfest
Message-ID: <199605040007.UAA16845@q.continuum.net>

Are you referring to the Rochester, NH Hosstraders Hamfest next Friday and Saturday, May 10th and 11th, or the Rochester, NY Hamfest?

A good place for BAers to meet at Hosstraders, is at Dale, KW1I's, site. He usually runs a GRC-19 setup in a trailer (non-milspec white and yellow) from a 28V genset, using an inflatable telescopic 50ft mast supported inverted vee on 80 and 40. I hope to be there early Friday and will fire up the Angry 19 on BA alley CW.

The site, for the last several Hosstraders, has been located just down the hill from the sound trailer. CU all there! I'll try to convince the XYL to make up a batch of chili to provide substenance to any hungy BAers who drop by.

73,
Chris Bowne, AJ1G
Stonington, CT

radiobwn@q.continuum.net
AMI No. 211

From: Charles Mann <mannc@idirect.com>
Sent: Wednesday, May 01, 1996 4:51 PM
Subject: Rochester Hamfest

My thanks to all who responded. Any list members planning a get together?

Charles
mannc@idirect.com

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: "Christopher A. Bowne" <radiobwn@q.continuum.net>
Subject: RE: Sovtek & Mullard tubes
Message-ID: <199605032348.TAA16472@q.continuum.net>

Terry O. recently wrote:

My friend who repairs guitar amplifiers in Seattle informs me that Sovtek is the American distributor's name for tubes made in Russia.

Does your friend, or anyone else, know where I can find a pair of new 7027A power tubes for a Newcomb e-75 amplifier that I am converting to a guitar amp for my JO, Ben, KA1YKG? He's built a large 4 speaker cabinet to drive with it in his shop class, and in true BA tradition, is using speakers that he picked up at last year's fall Hosstrader. The complete system will qualify as a BA, requiring casters and grab handles to move it around, and is likely to be VERY unpopular with the neighbors!

The music shop he deals with has not been able to find a source for the 7027As. Can another tube, such as the 5881, be substituted? What changes in biasing, etc. would be required, if any?

BTW, ER subscribers may remember seeing Ben's picture in a few issues several years back, "operating" my BC-654 field set at Hosstraders. He's taller than me now!

73, CU at Hosstraders and on BA Alley!

Chris Bowne, AJ1G
Stonington, CT
radiobwn@q.continuum.net
AMI No. 211

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: "Lahlum Ross" <ross_lahlum@msmail.wes.mot.com>
Subject: RE: Sovtek & Mullard tubes
Message-ID: <9605040146.AA26129@kay.wes.mot.com>

I bought a set of 7027A's a couple of years ago from Groove Tubes through a local music store. They have been working just fine in my Ampeg V4, one of my favorite bass amps (I used to use it a lot for jobbing but now I keep it at the rehearsal site & - forgive me - use a much lighter sand-state amp for jobbing. I rationalize this by saying it will last longer with less wear&tear. For that matter, so will I! The Ampeg has the same power as the new amp, 100 Watts, and it absolutely blows away the transistor unit!) Now I'm going off on a tangent... The 7027A is a great output tube for music, but not very common. There are mods around to replace it with 6L6's and I think also 6550's. A good reference (with lots of tube amp schematics and mod descriptions) is "The Tube Amp Book" by R. Aspen Pittman, the owner of Groove Tubes. Music dealers who carry Groove Tubes should also be able to get this book.
If you can't find Groove Tubes, try Minstrel Music in Niles, IL (847)965-2550. The owner, John, is as much as BA'er as anyone I know, except he's into tube amps rather than communications eqpt.
Have fun,
Ross

Does your friend, or anyone else, know where I can find a pair of new 7027A power tubes for a Newcomb e-75 amplifier that I am converting to a guitar amp for my JO, Ben, KA1YKG? <snip>

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: Mark Mandelkern <kn5s@lascruces.com>
Subject: SP-600 AVC
Message-ID: <199605040810.CAA02498@chile.lascruces.com>

boatanchors@theporch.com   96/5/3

Subj: SP-600 AVC

Thanks to several for informative notes on distortion in the Hammarlund Super-Pro SP-600. I had one in the 60s, and finally found another one just a few weeks ago. It had distortion on loud a.m. broadcast signals, and I didn't know what to do (except disconnect the 250 foot antenna).

Acting on a suggestion of Grant Youngman, NQ5T, that the problem was due to inadequate AVC drive, I started measuring. There was no way the avc circuit could keep up. Here was the situation before modification, at 1000 kc, 30% modulation at 1000 cps.

1000 uV	minor distortion
3000 uV	bad distortion
10,000 uV	the poor old receiver was completely crunched - no a.f. output

My other receivers of the same vintage, 75A-4 and 51S-1, both have agc amplifiers - an extra i.f. amp before the agc rectifier. The idea is to provide the agc rectifier with more signal than the diode detector used for demodulation. The Super-Pro has no such agc amplifier. The first two solution ideas were discarded.
(1) Adding another tube seemed like too much work.
(2) A d.c. avc amp, after the avc rectifier, would get me thrown off the list, because I would have used a transistor as a d.c. amplifier. (But I might try this later; recall that the 51S-1 has a whole lot of beautiful fire bottles - and one transistor.)
However, I did try a single transistor, not as an amplifier, but simply as an emitter follower, to see if the problem was merely that the avc rectifier could not supply enough current to the avc line. That didn't help, showing that the receiver really needed more avc voltage. The old RCA tube manuals say that the 6BA6 needs up to 50 volts bias for full gain control.

Here is the temporary solution I'm using. It has several drawbacks and I'm looking forward to reading some critical comments and better suggestions. These mods apply directly to the R-274C, serial above 1569 (-JX-26), and the parts numbers refer to TM 11-851, dated 5 October 1953. But the main parts (nrs 1 and 2 below) of the mods apply to all versions in TM 11-851 (R-274A, 274C, 320A, 483, 483A), and possibly to other versions. The mods are extremely simple and easily removed.

1. Parallel R60 (1 meg at the avc rectifier, the one leading towards the avc line) with 100k.
2. Short out R66 (18k for avc rectifier bias) with a short wire.
3. [Only for R-274C above 1569.] Short out R48 (1 meg in the resistive divider which reduces front end avc) with a short wire.
4. [Only for R-274C above 1569.] Remove R97, this is 3.3 meg located at the avc switch, which provides minimum -1 volt for the avc line in older versions, but is redundant in 274C>1569 because of the front end avc resistive divider. [Do not remove in older versions.]

Here are the results at 1000 kc, 30% modulation at 1000 cps. Bandwidth 8 kc. The a.f. stages contribute some distortion, up to 6%, so it seemed fair, for this test, to measure THD at the output of the diode detector, the top of the AFG control. What the distortion analyzer reads as THD is actually THD plus noise. At 10 uV, for instance, it is all noise; the analyzer reads the same with the signal generator modulation off. The avc voltage is read at the switch, with a 100 meg input meter.

uV	avc	THD+N(%)
0	-0.9	
1	-1.9	
10	-2.9	5.4 (all noise)
100	-4.1	1.5
1000	-6.1	1.1
10,000	-8.9	1.8
100,000	-12.2	5.8
200,000	-14.9	12
500,000	crunch	

Sensitivity: 0.4 uV for 10 dB S+N to N
This might be actually better; I used a 50 ohm sig. gen. and haven't yet modified the receiver input (95 ohms), or aligned the front end. Checks at higher frequencies seem fine also.

Disadvantages:
1. The maximum available a.f. output is less; 1 watt. This is because the overall receiver gain is considerably lowered with more avc applied. (10 mW will wake the neighbors.)
2. The S-meter calibration is off. With the pot at max, the meter reads a little on noise, and does not quite reach full scale at max signal. It might not be so difficult to fix this.
3. There is avc voltage even at low signal levels, since the rectifier bias is deleted. This is usually thought to be detrimental to sensitivity, although the above reading seems fine.
4. The AVC characteristic is flatter. Although some like signals to "jump out of the noise", and may complain of a receiver with a flat avc as being "noisy", many think a flat avc is an advantage when tuning for weak signals with loud signals nearby.

Advantages:
1. The AVC characteristic is flatter. Although some like signals to "jump out of the noise", and may complain of a receiver with a flat avc as being "noisy", many think a flat avc is an advantage when tuning for weak signals with loud signals nearby.
2. No more overload.

73, Mark KN5S

Mark Mandelkern
Las Cruces, New Mexico, USA

kn5s@lascruces.com

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: Al Klase <alklase@postoffice.ptd.net>
Subject: Re: SP-600 AVC
Message-ID: <199605041427.KAA01895@ns1.ptd.net>

I haven't been following this thread closely so I might have missed something, but it shouldn't be necessary to modify the AVC circuit to get it to work acceptably well at the signal levels Mark describes.

THIS SOUNDS LIKE ANOTHER CASE OF THE LEAKY CAP SYNDROME! Now listen up, because this applies to almost all tube receivers. Audio distortion on moderately strong sigs is almost always an AVC problem.

To check the AVC circuit: Disconnect the AVC bus to the RF and IF amplifiers from the detector diode load resistor. On the SP-600 this could probably be done at the "AVC/MAN" switch. Check the resistance of this bus to ground. It should be INFINITE! Ten megs is trouble. One meg is a distaster.

The problem can usually be traced to leaky filter caps, and you can watch the resistance climb as you replace each one. Occasionally you'll find a set with a resistor from AVC bus to ground at the far end. (The R-390 comes to mind) Lift this resistor and then test.

Getting wrapped around the axel repeatedly by problems like this has driven me to wholesale replacement of paper caps at the first sign of any leakage. Or for that matter, any cap that has wax on it or says "Micamold".

73,
Al Klase - N3FRQ
alklase@postoffice.ptd.net
Flemington, NJ

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: Bob Roehrig <broehrig@admin.aurora.edu>
Subject: Re: SP-600 AVC
Message-ID: <Pine.ULT.3.91.960504101125.3376C-100000@admin.aurora.edu>

On Sat, 4 May 1996, Al Klase wrote:

>   I haven't been following this thread closely so I might have missed
> something, but it shouldn't be necessary to modify the AVC circuit to get it

> to work acceptably well at the signal levels Mark describes.
>
> THIS SOUNDS LIKE ANOTHER CASE OF THE LEAKY CAP SYNDROME! Now listen up, because this applies to almost all tube receivers. Audio distortion on moderately strong sigs is almost always an AVC problem.

I pretty much agree wil Al. My Sp-600 copies a nearby 50KW BC station, about 15 miles away, without overload and no mods except for one minor change I did to the AGC circuit. I disconnected C137, a .25uf cap, from the BFO switch and connected it permanently to the AGC line. The time constant is then fine for both SSB/CW and AM. I doubt reconnecting this cap has any other affect on the receiver other than to lengthen the time constant. On the other hand, as someone else pointed out a few months ago, if the AGC time constant is too fast, the AGC voltage will follow the lower audio frequencies and cause distortion.

I just connected my sig gen to the SP-600 and applied a 700mv 99% modulated signal and it sounds undistorted.

```
        E-mail broehrig@admin.aurora.edu           73 de Bob, K9EUI
            CIS: Data / Telecom   Aurora University, Aurora, IL
```

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: "Gary H. Harmon, Jr." <gharmon@txdirect.net>
Subject: SX-42 & CE 100V Manuals Needed
Message-ID: <199605032250.RAA11982@legend.txdirect.net>

I am expecting a Hallicrafters SX-42 receiver and a Central Electronics 100V transmitter after Dayton and neither have manuals. If you can help with a copy I would greatly appreciate it. Copying costs and postage gratefully repaid quickly. Thanks in advance.

```
73, gary
===================================================================
<<<<<<<<<<<<<<< TOO many projects, NOT enough time! >>>>>>>>>>>>>>>>

Gary H. Harmon, Jr., K5JWK  gharmon@txdirect.net
6302 Robin Forest      K5JWK@K3WGF.EL09TN.#SAT.TX.USA.NOAM
San Antonio, TX 78239           (210) 657-1549
```

From boatanchors@theporch.com Sat May 4 03:37:35 1996
From: "Ray L. Mote" <rmote@rain.org>

Subject: Teletype manuals gone!
Message-ID: <Pine.SUN.3.91.960503133027.7176C-100000@coyote.rain.org>

One set goes to Tom Kleinschmidt, a friend of Vlad Dvorkin's; the other set goes to Lennox Carruth. (I know, I didn't *say* I had two sets. This way I can satisfy all two of the "takers". Makes me happy!)
73.....Ray Mote, W6RIC <rmote@rain.org> Oxnard, CA

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: "D. Ragsdale" <doragsda@oboe.aix.calpoly.edu>
Subject: This was too neat!
Message-ID: <9605050155.AA81883@oboe.aix.calpoly.edu>

I purchased my first mil surplus boatanchor about 8 days ago at a barn sale - a BC-348H (I've since purchased my second, a R-392; help, I'm addicted!). Got the BC-348 home and it was pretty nice, dirty from the barn, but no mods other than the dynamotor is gone and a AC power supply now rests where the DM was. I decided to pull all of the tubes to trace out if the modifier had wired all of the tube filaments in parallel (someone from the list told me they were orig. in two series sets, the sets in parallel) - well, I opened up the little cover on the module that holds the VT-65 (6C5) tube; the tube looked like it was made yesterday, not even a speck of dust on it, but the coolest thing was that the tube had written on it in yellow grease pencil: " OK - 6-14-44"!!! Someone had checked the tube 8 days after D-day, just a few days after my dad enlisted in the Army - and there was his handwriting to tell the story. OK, maybe I'm overreacting, but it really brought home that I was holding a piece of history in my hand.

I checked the tube on the tester (still good); and resisted the temptation to write, "OK - 5-4-96" on it, and put it back in its socket. Can't wait to finish checking out this BC-348 and get it working. Now I'm REALLY addicted.

Dave.
KF6BOM
David Ragsdale
doragsda@oboe.calpoly.edu -or-
du651@oasis.calpoly.edu

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: "Ray L. Mote" <rmote@rain.org>
Subject: WANTED: Publisher for WW2 equipment lists (fwd)!!!
Message-ID: <Pine.SUN.3.91.960504193407.18349A-100000@coyote.rain.org>

Fred Chesson has finally agreed to publish his many lists of WW2 military equipment and accessories. The hitch is that he's currently working on several other books, and hasn't had much success with prior (tentative) searches for a publisher on the WW2 stuff. If you aren't familiar with Fred, he's got lists of just about everything you can think of, including separate lists of boxes, bags, power units, operating accessories, -- in short, everything but the proverbial "kitchen sink".

Specialty publishers tend to focus in a narrow area, and there are none for this stuff. The larger publishers want a rather large estimated minimum purchaser base. Finding someone who will publish a limited run of books will be difficult.

If you can help in finding a publisher for this, you'll be doing a whale of a service for those of us who are interested in the WW2 gear. Those lists will answer a lot of questions of the "what the hell is *that*?" and "what does *this* go with?" type. If you think the lists of WW2 Navy stuff are wild, wait till you see Fred's stuff! He has separate lists of Army SCR/RC/BC stuff (see AWA Review Volume 6) plus lists of the various smaller accessories, the Navy stuff, and the AN-nomenclatured gear and accessories.

Contact Fred at:

Fred Chesson
144 Fiske Street
Waterbury, CT 06710
(203) 754-4764

73.....Ray Mote, W6RIC <rmote@rain.org>

From boatanchors@theporch.com Sat May 4 23:43:39 1996
From: djhutch@cris.com
Subject: WTB: HT-33B. SR-400, SR-2000
Message-ID: <199605050224.WAA04555@darius.cris.com>

Hello All!

I am looking for some Hallicrafters gear, namely the HT-33B amplifier, the SR-400 "Cyclone" and SR-2000 "Hurricane" transceivers. Any help in locating this gear would be appreciated!

73's

Dave Hutchison KW9U